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fifteen to twenty years several methods for producing transgenic plants have been developed, and the present invention, in particular embodiments, also relates to transgenic versions of the claimed hybrid maize line 39K40.

In the Claims

Please amend claims 6, 8, 10-12, 14-16, 18-21, 23-25, 27-29, and 31-32 as follows:

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6. (Amended)

The tissue culture according to claim 5, the cells or protoplasts of said cells having been isolated from a tissue selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, silks, flowers, kernels, ears, cobs, husks, and stalks.

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8. (Amended)

The maize plant of claim 2 wherein said plant further comprises a genetic factor conferring male sterility.

10. (Amended)

The method of claim 9 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

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11. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 2, wherein said maize plant has derived at least 50% of its alleles from 39K40 and is capable of expressing a combination of at least two 39K40 traits selected from the group consisting of: very high yield, stability of performance across different environments, very good stalks, very good early growth and a relative maturity of approximately 85 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

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12. (Amended)

The hybrid maize plant according to claim 2, wherein the genetic material of said plant contains one or more transgenes.

14. (Amended)

The method of claim 13 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

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15. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 12, wherein said maize plant has derived at least 50% of its alleles from 39K40 and is capable of expressing a combination of at least two 39K40 traits selected from the group consisting of: very high yield, stability of performance across different environments, very good stalks, very good early growth and a relative maturity of approximately 85 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

16. (Amended)

The hybrid maize plant according to claim 2, wherein the genetic material of said plant contains one or more genes transferred by backcrossing.

18. (Amended)

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The method of claim 17 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

19. (Amended)

A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 16, wherein said maize plant has derived at least 50% of its alleles from 39K40 and is capable of expressing a combination of at least two 39K40 traits selected

from the group consisting of: very high yield, stability of performance across different environments, very good stalks, very good early growth and a relative maturity of approximately 85 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

20. (Amended)

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A maize plant, or its parts, having all of the morphological and physiological characteristics of the plant of claim 2.

21. (Amended)

The maize plant of claim 20 wherein said maize plant further comprises a genetic factor conferring male sterility.

23. (Amended)

The method of claim 22 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

24. (Amended)

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A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 20, wherein said maize plant has derived at least 50% of its alleles from 39K40 and is capable of expressing a combination of at least two 39K40 traits selected from the group consisting of: very high yield, stability of performance across different environments, very good stalks, very good early growth and a relative maturity of approximately 85 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

25. (Amended)

The hybrid maize plant according to claim 20, wherein the genetic material of said plant contains one or more transgenes.

27. (Amended)

The method of claim 26 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

28. (Amended)

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A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 25, wherein said maize plant has derived at least 50% of its alleles from 39K40 and is capable of expressing a combination of at least two 39K40 traits selected from the group consisting of: very high yield, stability of performance across different environments, very good stalks, very good early growth and a relative maturity of approximately 85 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

29. (Amended)

The hybrid maize plant according to claim 20, wherein the genetic material of said plant contains one or more genes transferred by backcrossing.

31. (Amended)

The method of claim 30 wherein plant breeding techniques are selected from the group consisting of: recurrent selection, backcrossing, pedigree breeding, restriction fragment length polymorphism enhanced selection, genetic marker enhanced selection, and transformation.

32. (Amended)

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A maize plant, or its parts, wherein at least one ancestor of said maize plant is the maize plant, or its parts, of claim 29, wherein said maize plant has derived at least 50% of its alleles from 39K40 and is capable of expressing a combination of at least two 39K40 traits selected from the group consisting of: very high yield, stability of performance across different environments, very good stalks, very good early growth and a relative maturity of approximately 85 based on the Comparative Relative Maturity Rating System for harvest moisture of grain.

Please add new claims 33 - 40 as follows:

33. (New)

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A method of making a hybrid maize plant designated 39K40 comprising:
crossing an inbred maize plant GE535658, deposited as _____ with a second inbred maize
plant GE516223, deposited as _____; and
developing from the cross a hybrid maize plant representative seed of which having been
deposited under ATCC Accession Number _____.

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34. (New)

A method of making an inbred maize plant comprising:
obtaining the plant of claim 2 and
applying double haploid methods to obtain a plant that is homozygous at essentially every locus,
said plant having received all of its alleles from maize hybrid plant 39K40.

35. (New)

A method for producing an 39K40 progeny maize plant comprising:
(a) growing the plant of claim 2, and obtaining self or sib pollinated seed therefrom; and
(b) producing successive filial generations to obtain a 39K40 progeny maize plant.

36. (New)

A maize plant produced by the method of claim 35, said maize plant having received all
of its alleles from hybrid maize plant 39K40.

37. (New)

A method for producing a population of 39K40 progeny maize plants comprising:
(a) obtaining a first generation progeny maize seed produced by crossing the maize
plant of claim 2 with a second maize plant;
(b) growing said first generation progeny maize seed to produce F₁ generation maize
plants and obtaining self-pollinated seed from said F₁ generation maize plants; and

(c) repeating the steps of growing and harvesting successive filial generations to obtain a population of 39K40 progeny maize plants.

38. (New)

The population of 39K40 progeny maize plants produced by the method of claim 37, said population, on average, deriving at least 50% of its alleles from 39K40.

39. (New)

A 39K40 maize plant selected from the population of 39K40 progeny maize plants produced by the method of claim 37, said maize plant deriving at least 50% of its alleles from 39K40.

40. (New)

The method of claim 37, further comprising applying double haploid methods to said F₁ generation maize plant or to a successive filial generation thereof.